

## Welcome

NEDPA

Managing Through All Economic Cycles

March 8, 2016

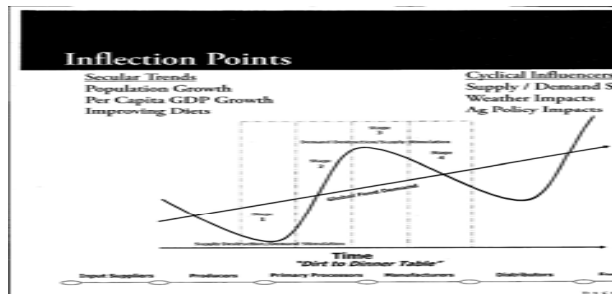
## GDP

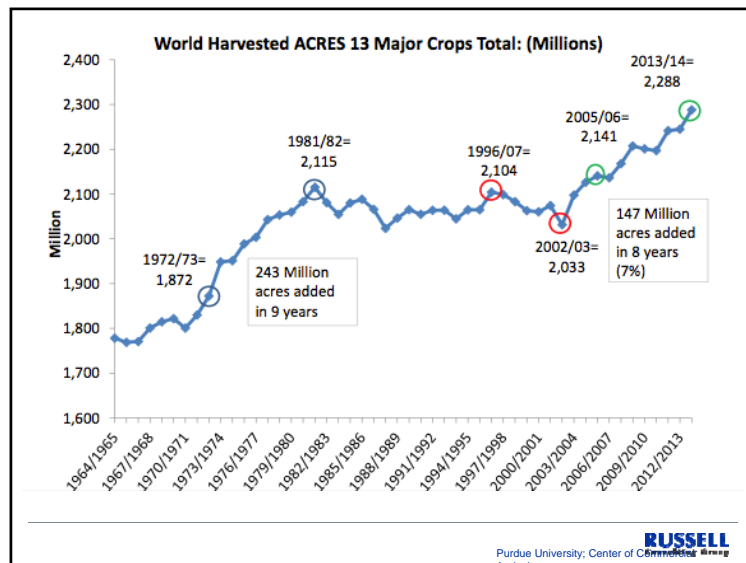
- 1970 US GDP 1 Trillion rest of the world 3 T= \$4 T GDP
- 2014 US GDP 18 Trillion \$72 T GDP
- US Growth 18 X
- China Growth 19 X
- Canada Growth 21 X
- $GDP = C + G + I + (X - I)$

## WHAT DOES THE FUTURE HOLD

- China will add 300 million people in their middle class in the next 8 years.
- The wealthiest 10% of the China's population represents more people than the total population of Japan
- Farmers will need to produce more food in the next 50 years than has been produced over the last 7,000 years.
- Global Diet Shift to meat 2010- 2020- up 33%
- Global Income growth 2010-2020 up 33% \$7,000- \$9,300 USD
- Crop demand up 25%

## INFLECTION POINTS





## LOW GRAIN PRICES

- We predicted it, recognizing farming is a cyclical business
- The vast majority of our clients bulletproofed their balance sheets.
- Those who did will have opportunities abound in the next two years.
- In equilibrium, the top third are making money, middle third are hanging in there, bottom third are losing money and exiting the industry. Dr. Danny Klinefelter
- Be thankful you live in a free enterprise society.

## COST PER BUSHEL VARY WIDELY

- Latta Harris, LLP
- 2014 actual cost of production
- Corn 26,017 acres
- \$3.05 to \$5.53 per bushel
- Average \$4.20 ISU \$4.42 U of IL \$5.10
- Soybeans 9757 acres
- \$7.61 to \$15.99
- Average \$10.20 ISU \$11.13 U of IL \$12.21

**Determine** the gross dollars per acre you need for:

Term Debt payments  
Operating Expenses  
Living  
Depreciation  
Profit



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## HAVING A PLAN

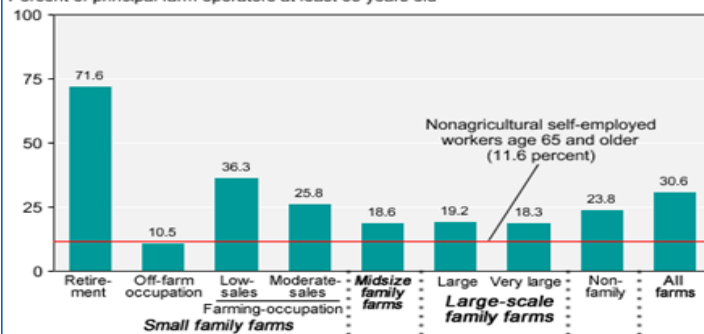
- Makes farming easier and more fun
- Reduces stress
- Worry less about competition
  - John Wooden- won 10 NCAA championships
  - Never had opposing team scouted

## WHAT DOES THE FUTURE HOLD

- “The future has a way of arriving unannounced”
- Drivers of Change
  - Resources
  - Technology
  - Demographics
  - Public Policy

## Older principal farm operators, by farm typology, 2012

Percent of principal farm operators at least 65 years old



Note: Small family farms have gross cash farm income (GCFI) < \$350,000. Midsize family farms have GCFI of \$350,000-\$999,999. Large-scale family farms have GCFI of \$1,000,000 or more.  
Source: USDA, Economic Research Service and National Agricultural Statistics Service, 2012 Agricultural Resource Management Survey.

## TREMENDOUS OPPORTUNITIES

- Farmers transitioning out
- Not fun any more
- Cheaper used equipment prices
- Livestock potential and profitability
- Slower growth in global crop acres
- Technology

## POSITIVE CHANGES

- Lower Fertilizer prices
- Lower fuel prices
- Increased Ethanol
- Increased Feed

## INDUSTRY HAS SOME CHALLENGES

- \$50 per acre Nitrogen Inefficiencies per year.
- 1/3 of corn acres have best management practices.
- \$420 million Nutrients lost to Gulf annually.
  - Source WinField US, LLC ( United Suppliers)

## SOLUTIONS

- Drainage Water Management
- 30 million acres suitable in Great Lakes and Gulf watershed

Tile on 30 to 40 foot centers

Water Level Control Structures

Sub- Irrigation

NRCS cost share

Up to 50% yield increase

78 to 85% reduction in Nitrate and Phosphorus in Drainage Water

•

## SOLUTIONS

- Causes of Crop Loss in Iowa for corn 1948-2010

- Drought 40% of the time
- Excess moisture 31% of the time

### Soybeans from 1955-2010

Drought 28% of the time

Excess moisture 31% of the time

Source Dr. Chad Hart, Iowa State University

## "DEMOCRACY OF FOOD"

- Changing PR environment
- Activists
- Look for opportunities to develop strategies to differentiate your farm in:
  - ✓ Animal comfort
  - ✓ Water
  - ✓ Nutrient Management
  - ✓ Soil Quality

## DIVERSIFICATION

- \$100,000 invested @ 7% for 10 years = \$196,968



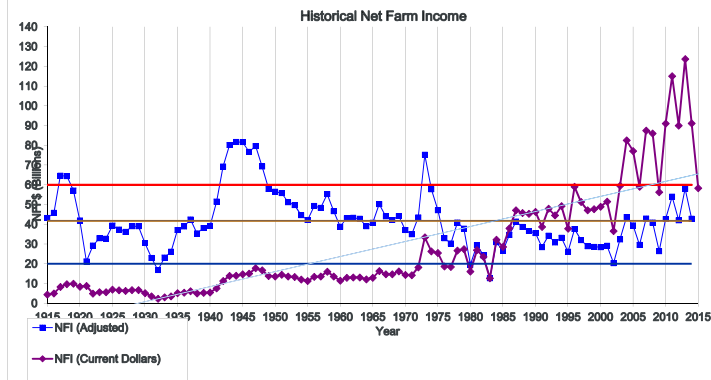
## DIVERSIFICATION

- \$20,000 @ 20% for 10 years = \$123,834
- \$20,000 @ 15% for 10 years = \$80,914
- \$20,000 @ 7% for 10 years = \$39,343
- \$20,000 @ 0% for 10 years = \$20,000
- \$20,000 lose it all = \$0
- Total = \$264,091
- 34% more than \$196,968

## LOOK AT DIVERSIFICATION

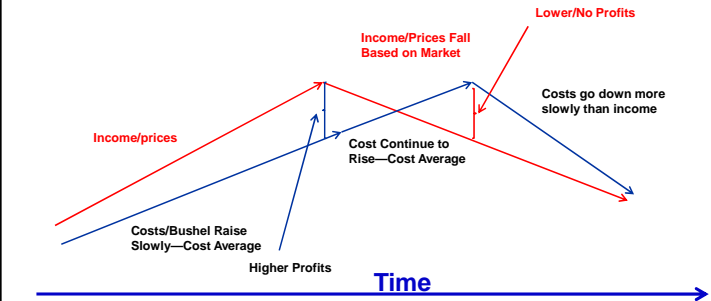
- Livestock Buildings
- Alternative Crops
- Non GMO
- Organic
- Natural Meat

## A LOOK AT HISTORY



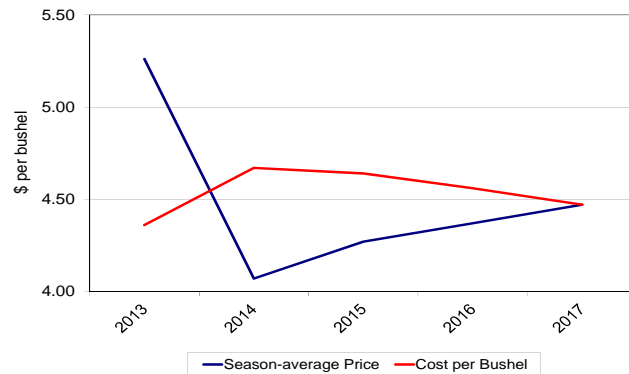
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## BEWARE OF THE EXPENSE TAIL



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## PROJECTED CORN PRICE VS COST



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## HEDGING MILK

Month	net per Hund.	Gross Milk Price per Month LBS shipped	Forward contract loss or gain	
Jan	\$19.11	2647260	\$1.02	\$26,975.58
Feb	\$18.67	2323200	\$1.37	\$31,827.84
March	\$18.14	2630990	\$1.17	\$30,835.20
April	\$18.19	2557660	\$1.16	\$29,668.86
May	\$17.70	2617620	\$0.93	\$24,343.87
June	\$17.57	2597970	\$0.76	\$19,744.57
July	\$17.75	2638300	\$1.07	\$28,229.81
August	\$17.68	2696580	\$1.12	\$30,201.70
Sept	\$18.41	2438560	\$1.21	\$29,506.58
Oct	\$18.20	2671540	\$0.79	\$21,105.17
Nov	\$18.23	2731940	\$0.75	\$20,489.55
Dec	\$18.19	2783340	\$1.44	\$40,080.10
Note: .07/hund for dues should be added to the above prices for a gross milk price				
Average for the year	\$18.15	Total 31334960	\$1.07	\$333,008.81

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## WHAT'S NEW

### • Collaborative Consumption

- Sharing products and services
- Obtain value from goods that are not entirely exploited by their owners
- Airbnb –on line accommodations marketplace
- Zipcar- car sharing brand
- FarmLink.com
- Coops have equipment such as sprayers, applicators, etc. that are only used certain times of the year and they lease them to others who need them other times of the year.

## GAINING AN EDGE- TECHNOLOGY

- Precision Farming
  - 7-12 bushels per acre
  - \$28-\$48 per acre revenue @ \$4 per bushel
- Investment in technology, variable costs about even  
Varies by location and topography.

## GAINING AN EDGE

- When we invest in new technology, we expect some of that to fail. If you expect things to always succeed, your probably not far enough out on the learning edge.

Kim Jordan, Co Founder and CEO, New Belgium Brewery

## GAINING AN EDGE

- First you need to know where you are at
- TruHarvest Yield Benchmarking
- Russell Brothers, LLC 2013 yield was 217 bu/ac
- 12 years manure, pattern tiled.
- Compares your yield with similar soil, topography, rainfall. GDDS
- 229 @ 95%

## RCG CLIENT BASE

### • Benchmark Data

	2011 Avg.	2012 Avg.	2013 Avg.	2014 Avg.	2015 Avg.
Machinery Cost Per Acre	\$89.46	\$98.99	\$112.42	\$127.33	\$126.36
Labor Cost Per Acre	\$45.48	\$44.32	\$50.69	\$51.11	\$48.03
Combined Machinery/Labor	\$134.94	\$143.21	\$163.11	\$178.44	\$174.39
Return on Assets (ROA)	12.2%	12.5%	12.4%	4.6%	4.85%
Return on Equity (ROE)	20.2%	21.5%	17.9%	5.5%	6.13%

- RCG Five year Avg. ROE = 14.25%
- Fortune 500 2013 Median ROE 13.7%

## LEVERAGE POINTS FOR HIGH PROFIT FARMS

- Marketing- \$.30/bushel on 200 bushel corn \$60
- Machinery Cost /acre RCG average is \$126 (top10%\$69) difference is \$55
- Labor Cost / acre RCG average is \$48 (top10% is \$21) difference is \$27
- Agronomic Management, precision ag produces on average 7-12 bu \$38

Where is the money ? Total potential= \$180

## RCG CLIENT BASE

### Is your Balance Sheet Bulletproof?

	2013 Avg.	2014 Avg.	2015 Avg.
Working Capital/Annual Expense	58.26%	46.46%	40.70%
Working Capital per Acre	\$480.84	\$334.51	\$363.70
Owners Equity %	68%	63%	65.8%

## GROWTH IN NET WORTH

- |                           |                             |
|---------------------------|-----------------------------|
| • \$500,000 NW            | \$500,000                   |
| • Grow 9.67% for 10 years | Grow at 17.77% for 10 years |
| • \$1,258,000             | \$2,566,000                 |



## WHAT DOES THE FUTURE HOLD

- **“The future has a way of arriving unannounced”**

- **Drivers of Change**

- Resources
- Technology
- Demographics
- Public Policy

## RESOURCES

- Natural Gas( Marcella, Bakken, Eagle Ford (south Texas) Brown Dense (Ark & LA) Tuscaloosa Marine ( LA & MS) Cline, Texas)
- Methane Hydrate
  - Fire Ice
  - 3% would provide US natural gas for 400 years

## AMERICA'S HUGE COST ADVANTAGE IN NATURAL GAS

- The United States has a huge cost advantage in natural gas. The cost of natural gas at Cove Point in southern Maryland this summer was \$2.08 per million BTU.
- In Brazil it is \$14.56,
- In China \$15.25,
- Japan, \$15.65;
- the UK, \$11.66,
- India \$13.75 and
- Argentina, \$15.65. We have a competitive advantage unlike no one else in the world.

## ANHYDROUS PRODUCTION

- It takes 34,000 Cu ft of Natural Gas to make a ton of Anhydrous
- 1 cu ft natural gas = 1086 million BTU
- 36,924,000
- \$2.08 per million BTU
- $36.9 \times \$2.08 = \$77$
- $\$77/.80 = \$96$  per ton

## ENERGY SELF SUFFICIENCY

- 8 years ago we were importing 10 times as much petroleum as exports, 2.6 today
- By the end of 2016 net energy exports are projected to exceed energy imports

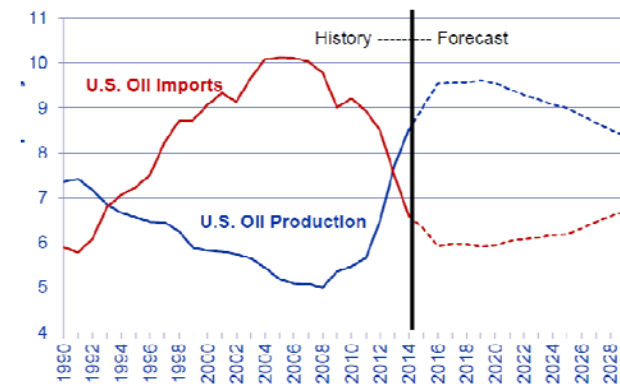
## TECHNOLOGY

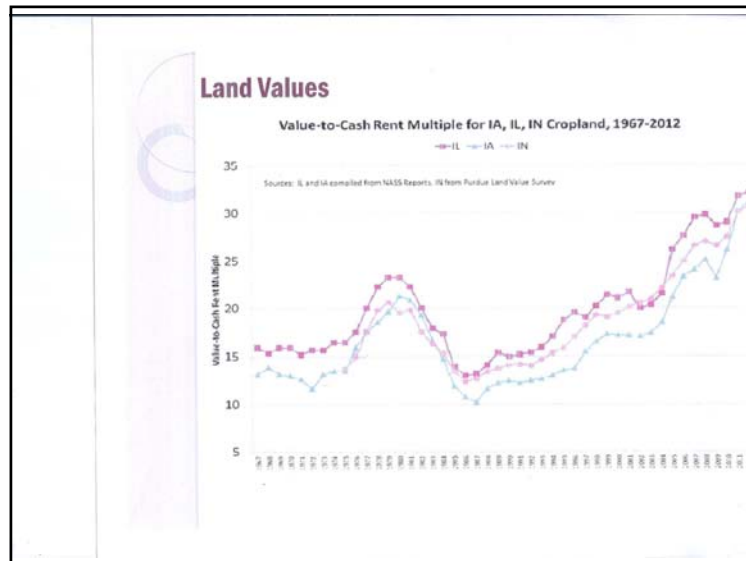
- About every 30 years there is a major technological change that changes the world.
- Last one was the microprocessor
- Current one is Fracking
- Methane Hydrate extraction is now where Fracking was 10 years ago.

## GAINING AN EDGE

- Current drag on GDP of cost of imported oil is 2 ½ % of GDP- would boost to 5%
- Lower cost fertilizer and energy to farmers
- 70% of all farm cost are directly or indirectly tied to energy costs

## U.S. OIL PRODUCTION





- One acre land
- Six ounces gold
- 95 barrels of oil

## WHERE ARE INTEREST RATES HEADED?

### Ten year Treasury Rates

1/2/62-4/10/13 51 years

High: 9/30/81 15.84%

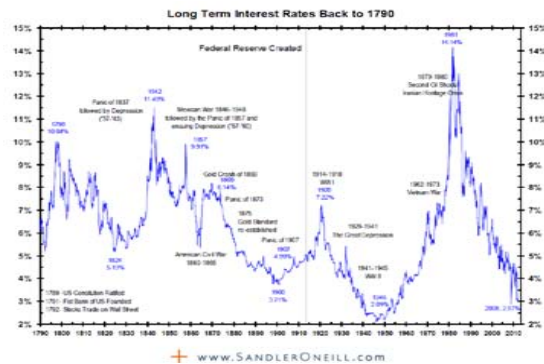
Low: 7/25/12 1.43%, now 2.22%

Average: 6.61%

## WHERE ARE INTEREST RATES HEADED

- 10 year treasuries since 1871 (144 years)
- There have been two times 10 years treasuries have gone below 4% for longer than a year.
- Both times it took over 30 years for it to move back above 4%.
- 1881-1912 31 years
- 1925-1959 34 years
- It has been under 4% since 2008.

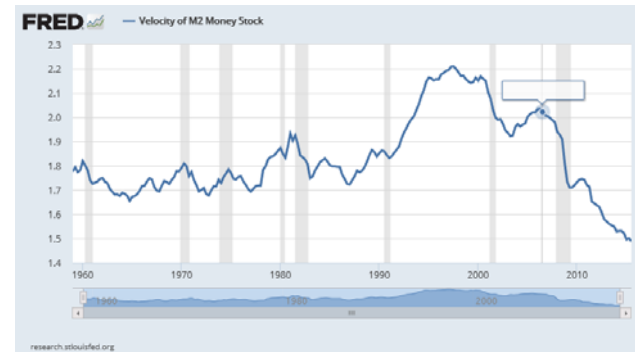
## LONG-TERM INTEREST RATE TRENDS



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## VELOCITY OF MONEY STOCK (M2V)



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## RISK MANAGEMENT RECOMMENDATIONS

### • Transition Planning

- ✓30% of family owned businesses survive into the second generation
- ✓12% of family owned businesses survive into the third generation
- ✓3% survive into a fourth generation and beyond

- Source; Family Business Institute,
- January 2007 Study

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